

DC-Micromotors

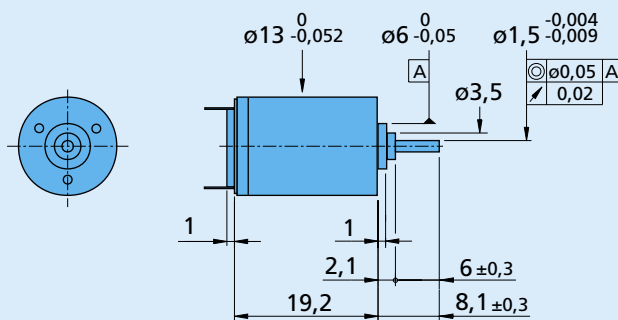
Precious Metal Commutation

1,3 mNm

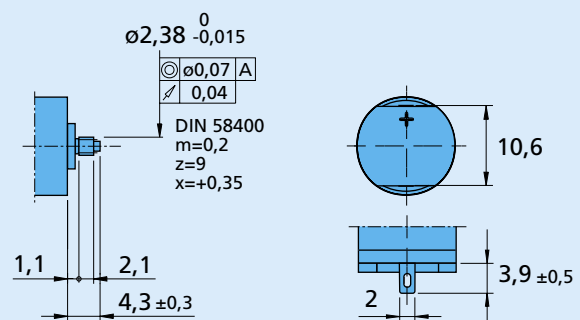
For combination with
Gearheads:
13A, 14/1, 15/3, 15/5
Encoders:
IE2 – 50 ... 400

Series 1319 ... SR

1319 T		006 SR	012 SR	024 SR		
1	Nominal voltage	U _N	6	12	24	Volt
2	Terminal resistance	R	8,26	34,6	119	Ω
3	Output power	P _{2 max.}	1,00	0,95	1,10	W
4	Efficiency	η _{max.}	66	65	66	%
5	No-load speed	n _o	13 100	12 800	14 600	rpm
6	No-load current (with shaft ø 1,5 mm)	I _o	0,031	0,015	0,009	A
7	Stall torque	M _H	2,91	2,84	2,89	mNm
8	Friction torque	M _R	0,13	0,13	0,13	mNm
9	Speed constant	k _n	2 280	1 110	637	rpm/V
10	Back-EMF constant	k _E	0,438	0,897	1,570	mV/rpm
11	Torque constant	k _M	4,19	8,57	15,0	mNm/A
12	Current constant	k _I	0,239	0,117	0,067	A/mNm
13	Slope of n-M curve	Δn/ΔM	4 500	4 510	5 050	rpm/mNm
14	Rotor inductance	L	130	530	1 600	μH
15	Mechanical time constant	τ _m	19	19	19	ms
16	Rotor inertia	J	0,40	0,40	0,36	gcm ²
17	Angular acceleration	α _{max.}	72	71	80	·10 ³ rad/s ²
18	Thermal resistance	R _{th 1} / R _{th 2}	8 / 35			K/W
19	Thermal time constant	τ _{w1} / τ _{w2}	3,8 / 175			s
20	Operating temperature range:					
	– motor		– 30 ... + 85 (optional – 55 ... + 125)			°C
	– rotor, max. permissible		+ 125			°C
21	Shaft bearings		sintered bronze sleeves			
22	Shaft load max.:					
	– with shaft diameter		1,5			mm
	– radial at 3 000 rpm (3 mm from bearing)		1,2			N
	– axial at 3 000 rpm		0,2			N
	– axial at standstill		20			N
23	Shaft play:					
	– radial	≤	0,03			mm
	– axial	≤	0,2			mm
24	Housing material		steel, black coated			
25	Weight		12			g
26	Direction of rotation		clockwise, viewed from the front face			
Recommended values						
27	Speed up to	n _{e max.}	12 000	12 000	12 000	rpm
28	Torque up to	M _{e max.}	1,3	1,3	1,3	mNm
29	Current up to (thermal limits)	I _{e max.}	0,410	0,200	0,100	A



1319 T ... SR



1319 E ... SR
for Gearheads 15/...